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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/691,667	10/24/2003	Kouichi Takeuchi	12014-0022	6353

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EXAMINER

CARRILLO, BIBI SHARIDAN

ART UNIT	PAPER NUMBER
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1746

DATE MAILED: 02/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/691,667	Applicant(s) TAKEUCHI ET AL.	
	Examiner Sharidan Carrillo	Art Unit 1746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 December 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7,15-17,21 and 22 is/are pending in the application.
- 4a) Of the above claim(s) 21 and 22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 15-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-7,15-17,21 and 22 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10/24/2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

- I. Newly submitted claims 21 and 22 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons:
2. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-7 and 15-17, drawn to the method, classified in class 134, subclass 28.
 - II. Claims 21-22, drawn to a method of manufacturing a steel plate, classified in class 76, subclass 01.

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions have different functions.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 21 and 22 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Drawings

3. Figures 1, 4-5 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. Refer to JP2000-297390. See MPEP § 608.02(g).

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-7 and 15-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1 and 5 are indefinite because it is unclear how the distribution ratio is calculated based on the pickling pattern and the traveling speed. Additionally, it is unclear how the amount of acid solution in two of the tanks is controlled based on the total amount of acid and the distribution ratio. The claim fails to teach a calculating step. It is unclear how the distribution ratio is “used in the controlling step” to determine the amount of acid supplied to each tank. Claim 2 is indefinite because it is unclear what value is used to determine the distribution ratio. In the remarks, applicant argues that values for the distribution ratio are recited on page 20, lines 10-14. However, upon careful review, page 10, line 4 states that “a table having set values for the distribution ratio was prepared in advance, and this was input into the memory of ...the control unit”. However, no table has been provided in the instant specification which lists the distribution ratio values. What is the value used to determine the distribution ratio and further, what are the predetermined set values. Is the value the same as the scale thickness, width, or traveling speed? Claim 2 is further indefinite because it recites more than one distribution ratio

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in comparison to claim 1 which recites only 1 distribution ratio. Claim 5 is further indefinite because it is unclear how one can add a correction value to the supplied amount of acid solution. Claim 5 is further indefinite because it is unclear what is the set acid solution concentration value. Claim 5 is indefinite because it is unclear what is occurring with respect to the last step. Specifically, it is unclear what is meant by the phrase “adding a correction value of acid solution to the supplied amount of acid solution in each of the at least two pickling tanks based on a deviation of a measured value of a concentration of the acid solution each of the pickling tanks from a set acid solution concentration value “. How is the set acid concentration value different from the amount of acid solution controlled, as recited in line 5 of claim 5. Claim 15 is indefinite because it is dependent on claim 2, which recites “set values of distribution ratios” in comparison to “set values of scale thicknesses”. Since claim 15 is dependent on claim 2, should the “set values” of claim 15 refer to distribution ratio instead of scale thickness.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-2, 4-7, and 16-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Mabuchi et al. (6096137).

In reference to claims 1, 4, and 16, Mabuchi et al. teach a method of controlling

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pickling by monitoring operating conditions such as thickness and width of the steel strip, line speed (Abstract) and calculating the concentration of acid supplied into the pickling tank based on the above parameters.

In reference to the distribution ratio, Mabuchi et al. Teach calculating and controlling the concentration distribution of aid based on the operating conditions (col. 2, lines 39-65). In reference to claims 2 and 6, and in view of the indefiniteness, the limitations are met by Mabuchi et al. In reference to claim 6, also refer to col. 3, lines 25-31. In reference to claim 5, refer to col. 7, lines 15-25 which teaches determining preset values for the concentration of the acid. In reference to claims 7 and 17 refer to Fig. 1.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

10. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various

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claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

11. Claims 3 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mabuchi et al. (6096137) in view of Kawasaki et al. (4872245).

Mabuchi et al. teach the invention substantially as claimed with the exception of scale thickness based on the steel type. Page 6 of the instant specification teaches “steel type” based on the steel composition and coiling temperature.

Kawasaki et al. teach a method for continuous pickling of a hot-rolled steel strip (Abstract). In col. 7, lines 35-45, Kawasaki et al. teach that the type or grade and coiling temperature are initially set in the control computer. The properties of quantity of scale is determined based on the input in the control computer.

It would have been obvious and within the level of the skilled artisan to modify the method of Mabuchi et al. to include adjusting the scale thickness based on the operating parameters, as taught by Kawasaki et al, for purposes of removing scaled from the surface of the hot-rolled steel.

Response to Arguments

12. Applicant argues that Mabuchi does not determine the total amount of acid required and determining the amount of acid supplied to each tank. Applicant further argues that Mabuchi does not determine the distribution ratio.

Applicant's arguments are unpersuasive since Fig. 8 of Mabuchi clearly teaches the amount of HCl in each of the tanks. Clearly, it is well within the level of the skilled artisan, based on Fig. 8 to calculate the total amount of acid in the tanks based on the amount of acid in each tank, as illustrated by Fig. 8. Mabuchi clearly teaches the amount of acid in each tank (col. 10, Example 2), the total amount being the summation of each acid concentration per tank. Col. 7, lines 30-35 teaches obtaining the concentration "DISTRIBUTION" of acid in each of the pickling tanks. This is no different from applicant's distribution ratio. In col. 12, lines 57-64, Mabuchi teaches inputting initial values and calculating what parameters and amount of a acid concentration should be changed. Applicant's distribution ratio is equivalent to determining the concentration distribution of acid in each tank.

13. Applicant argues that Mabuchi fails to teach determining a total amount of acid supplied prior to the onset of the pickling operation. Applicant's arguments are unpersuasive because they are not commensurate in scope with the instantly claimed invention.

14. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

15. Applicant argues that Mabuchi fails to teach dividing the total amount of acid amongst the 2 tanks based on the distribution ratio. Applicant's arguments are unpersuasive because they are

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not commensurate in scope with the instantly claimed invention. Additionally, from Fig. 8, Mabuchi achieves the same result since the amount of acid in teach tank is determined. Further, it would have been well within the level of the skilled artisan to determine the amount of acid in teach tank given the total amount of acid. The calculation of “merely dividing the total to determine the amount in each tank”, as cited applicant’s representative is well within the level of the skilled artisan.

16. Applicant argues that Mabuchi cannot establish a “prima facie case of anticipation”. It is unclear what applicant means by this since “prima facie” is associated with 35 U.S.C. 03 (obviousness) and anticipation is associated with 35 U.S.C. 102.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sharidan Carrillo whose telephone number is 571-272-1297. The examiner can normally be reached on Monday-Friday, 6:00a.m-2:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr can be reached on 571-272-1414. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sharidan Carrillo
Primary Examiner
Art Unit 1746

bsc



SHARIDAN CARRILLO
PRIMARY EXAMINER